

What is claimed is:

1. An animal protein free cell culture medium comprising soy hydrolysate and yeast hydrolysate.
2. The animal protein free cell culture medium according to claim 1, wherein the soy hydrolysate is present in a concentration of at least 0.05% (w/v) and yeast hydrolysate is present in a concentration of at least 0.05% (w/v).
3. The animal protein free cell culture medium according to claim 1, wherein the soy hydrolysate is present in a concentration of less than 1.0% (w/v) and yeast hydrolysate is present in a concentration of less than 0.3% (w/v).
4. The animal protein free cell culture medium according to claim 1, wherein the soy hydrolysate is present in a concentration of between about 0.2% (w/v) to about 0.6% (w/v) and yeast hydrolysate is present in a concentration of between about 0.05% (w/v) to about 0.2 % (w/v).
5. The animal protein free cell culture medium according to claim 1, wherein the soy hydrolysate is present in a concentration of between about 0.25% (w/v) to about 0.35% (w/v) and the yeast hydrolysate is present in a concentration of between about 0.05% (w/v) to about 0.15% (w/v).
6. The animal protein free cell culture medium according to claim 1, wherein the soy hydrolysate is present in a concentration of about 0.3% (w/v) and the yeast hydrolysate is present in a concentration of about 0.1 % (w/v).
7. The animal protein free cell culture medium according to claim 1, wherein 3 parts by weight soy hydrolysate are present to 1 part by weight yeast hydrolysate.
8. The animal protein free cell culture medium according to claim 1, wherein the yeast hydrolysate is a ultrafiltrated purified yeast hydrolysate, and wherein at least

40% of said yeast hydrolysate has a molecular weight of less than or equal to 500 Daltons.

9. The animal protein free cell culture medium according to claim 1, wherein the soy hydrolysate is a ultrafiltrated purified soy hydrolysate, and wherein at least 40% of said soy hydrolysate has a molecular weight of less than or equal to 500 Daltons.

10. A method of producing an animal protein free cell culture medium, wherein a basal medium that is free of any animal proteins is supplemented with a yeast hydrolysate and a soy hydrolysate.

11. The method according to claim 10, wherein the concentration of soy hydrolysate is at least 0.05% (w/v) and the concentration of yeast hydrolysate is at least 0.05% (w/v).

12. The method according to claim 10, wherein the concentration of soy hydrolysate is less than 1.0 % (w/v) and the concentration of yeast hydrolysate is less than 0.3 % (w/v).

13. A method of cultivating a cell culture of cells comprising:  
providing a medium comprising soy hydrolysate at a concentration of about 0.05% (w/v) to about 1% (w/v) and yeast hydrolysate at a concentration of about 0.05% (w/v) to about 0.3% (w/v); and  
propagating the cells in the medium to form the cell culture.

14. The method according to claim 13, wherein the cells are animal cells selected from the group consisting of insect cells, avian cells and mammalian cells.

15. The method according to claim 13, wherein the cells are recombinant cells.

16. The method according to claim 13, wherein the cells are selected from the group of cells consisting of BSC-1 cells, LLC-MK cells, CV-1 cells, COS-cells, VERO

cells, MDBK cells, MDCK cells, CRFK cells, RAF cells, RK-cells, TCMK-1 cells, LLC-PK cells, PK15 cells, LLC-RK cells, MDOK cells, BHK-21 cells, CHO cells, NS-1 cells MRC-5 cells, WI-38 cells, BHK cells, and RK-cells.

17. An animal protein free confluent cell culture process, comprising:
  - providing an animal protein free medium comprising soy hydrolysate and yeast hydrolysate;
  - growing the cells in the medium, and
  - passaging and sub-cultivating the cells grown in the medium while in contact with a non-animal-derived protease in order to obtain a confluent cell culture.
18. A culture of cells cultivated in an animal protein free medium, wherein the medium comprises soy hydrolysate at a concentration of about 0.05% (w/v) to about 1% (w/v) and yeast hydrolysate at a concentration of about 0.05% (w/v) to about 0.3% (w/v).
19. The culture of cells according to claim 18, wherein the cells are animal cells selected from the group consisting of insect cells, avian cells and mammalian cells.
20. The culture of cells according to claim 18, wherein the cells are recombinant cells.
21. The culture of cells cultivated according to claim 18, wherein the cells are infected with a virus.
22. The culture of cells according to claim 18, wherein the cells are selected from the group of cells consisting of BSC-1 cells, LLC-MK cells, CV-1 cells, COS-cells, VERO cells, MDBK cells, MDCK cells, CRFK cells, RAF cells, RK-cells, TCMK-1 cells, LLC-PK cells, PK15 cells, LLC-RK cells, MDOK cells, BHK-21 cells, CHO cells, NS-1 cells MRC-5 cells, WI-38 cells, BHK cells, and RK-cells.

23. A method for producing a virus, comprising:
  - providing a culture of cells that have been grown in an animal protein free medium comprising soy hydrolysate at a concentration of about 0.05% (w/v) to about 1% (w/v) and yeast hydrolysate at a concentration of about 0.05% (w/v) to about 0.3% (w/v);
    - infecting the cells with a virus; and
    - incubating the infected cells to propagate the virus.
24. The method according to claim 21, wherein the cells are animal cells selected from the group consisting of insect cells, avian cells and mammalian cells.
25. A method for producing vaccinia virus, comprising:
  - providing a culture of cells that have been grown in an animal protein free medium comprising soy hydrolysate at a concentration of about 0.05% (w/v) to about 1% (w/v) and yeast hydrolysate at a concentration of about 0.05% (w/v) to about 0.3% (w/v);
    - infecting the cells with vaccinia virus; and
    - incubating the infected cells to propagate vaccinia virus.
26. A method for producing coronavirus, comprising:
  - providing a culture of cells that have been grown in an animal protein free medium comprising soy hydrolysate at a concentration of about 0.05% (w/v) to about 1% (w/v) and yeast hydrolysate at a concentration of about 0.05% (w/v) to about 0.3% (w/v);
    - infecting the cells with coronavirus; and
    - incubating the infected cells to propagate coronavirus.
27. A method for producing orthomyxovirus, comprising:
  - providing a culture of cells that have been grown in an animal protein free medium comprising soy hydrolysate at a concentration of about 0.05% (w/v) to about 1% (w/v) and yeast hydrolysate at a concentration of about 0.05% (w/v) to about 0.3% (w/v);

infecting the cells with orthomyxovirus; and  
incubating the infected cells to propagate orthomyxovirus.

28. The method according to claim 27, wherein the orthomyxovirus is Influenza A, B or C Virus.

29. A method for producing Ross River virus, comprising  
providing a culture of cells that have been grown in an animal protein free medium comprising soy hydrolysate at a concentration of about 0.05% (w/v) to about 1% (w/v) and yeast hydrolysate at a concentration of about 0.05% (w/v) to about 0.3% (w/v);  
infecting the cells with Ross River virus; and  
incubating the infected cells to propagate Ross River virus.

30. A method for producing Flavivirus, comprising:  
providing a culture of cells that have been grown in an animal protein free medium comprising soy hydrolysate at a concentration of about 0.05% (w/v) to about 1% (w/v) and yeast hydrolysate at a concentration of about 0.05% (w/v) to about 0.3% (w/v);  
infecting the cells with Flavivirus; and  
incubating the infected cells to propagate Flavivirus.

31. The method according to claim 30, wherein the Flavivirus is selected from the group consisting of Yellow fever virus, Japanese encephalitis virus, Tick-borne encephalitis virus, West nile Virus and Hepatitis C virus.

32. A method for producing picornavirus, comprising:  
providing a culture of cells that have been grown in an animal protein free medium comprising soy hydrolysate at a concentration of about 0.05% (w/v) to about 1% (w/v) and yeast hydrolysate at a concentration of about 0.05% (w/v) to about 0.3% (w/v);  
infecting the cells with picornavirus; and

incubating the infected cells to propagate picornavirus.

33. The method according to claim 32, wherein the picornavirus is selected from the group consisting of poliovirus and hepatitis A virus.

34. A method of producing an immunogenic composition comprising a virus or a virus antigen, wherein the method comprises:

providing a culture of cells that have been grown in an animal protein free medium comprising soy hydrolysate at a concentration of about 0.05% (w/v) to about 1% (w/v) and yeast hydrolysate at a concentration of about 0.05% (w/v) to about 0.3% (w/v);

infecting the cells with the virus;

incubating the infected cells to propagate the virus;

harvesting the virus or virus antigen produced

prepare an immunogenic composition from the harvested virus or virus antigen.

35. The method according to claim 34, wherein said harvested virus or virus antigen is subjected to purification.

36. A method of producing an immunogenic composition comprising a virus or a virus antigen, wherein the method comprises:

providing a culture of mammalian cells, wherein the cells are selected from the group of monkey kidney cells, bovine kidney cells, dog kidney cells, pig kidney cells, mouse kidney cells, rat kidney cells, sheep kidney cells, hamster kidney cells and human cells that have been grown in an animal protein free culture medium comprising a soy hydrolysate and a yeast hydrolysate;

infecting the cells with a virus selected from the group of orthomyxoviruses, paramyxoviruses, reoviruses, picornaviruses, flaviviruses, arenaviruses, herpesviruses, poxviruses, coronaviruses and adenoviruses;

incubating the culture of cells to propagate the virus;

harvesting the virus or virus antigen so produced; and

preparing an immunogenic composition from the harvested virus or virus antigen.

37. A culture of cells infected with orthomyxovirus, wherein the cells are cultivated in an animal protein free medium, wherein the medium comprises soy hydrolysate and yeast hydrolysate.

38. The culture according to claim 37, wherein the soy hydrolysate is at a concentration of about 0.05% (w/v) to about 1% (w/v) and yeast hydrolysate at a concentration of about 0.05% (w/v) to about 0.3% (w/v).

39. A culture of cells infected with poxvirus, wherein the cells are cultivated in an animal protein free medium, wherein the medium comprises soy hydrolysate and yeast hydrolysate.

40. The culture according to claim 39, wherein the soy hydrolysate is at a concentration of about 0.05% (w/v) to about 1% (w/v) and yeast hydrolysate at a concentration of about 0.05% (w/v) to about 0.3% (w/v).

41. A culture of cells infected with herpesvirus, wherein the cells are cultivated in an animal protein free medium, wherein the medium comprises soy hydrolysate and yeast hydrolysate.

42. The culture according to claim 41, wherein the soy hydrolysate is at a concentration of about 0.05% (w/v) to about 1% (w/v) and yeast hydrolysate at a concentration of about 0.05% (w/v) to about 0.3% (w/v).

43. An orthomyxovirus preparation that is free of animal proteins, wherein the preparation is obtainable by cultivating cells infected with influenza virus in an animal protein free medium, wherein the medium comprises soy hydrolysate and yeast hydrolysate.

44. A herpes virus preparation that is free of animal proteins, wherein the preparation is obtainable by cultivating cells infected with influenza virus in an animal protein free medium, wherein the medium comprises soy hydrolysate and yeast hydrolysate.
45. A poxvirus preparation that is free of animal proteins, wherein the preparation is obtainable by cultivating cells infected with influenza virus in an animal protein free medium, wherein the medium comprises soy hydrolysate and yeast hydrolysate.